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~~Patent Claims~~

1. Method of measuring the two-dimensional potential distribution in CMOS semiconductor components and of defining the two-dimensional dopant distribution, characterized by the fact that the phase of an electron wave is measured by electron holography whereby the minimum lateral resolution is in the nm range.
2. Method of claim 1, characterized by the method steps of
- generating a planar electron wave (1);
 - modulation of the planar electron wave (1) as a result of its passing through a thinned cross-sectional sample of the semiconductor component;
 - enlarging the modulated image wave (3) by an objective lens (5);
 - Superposing the enlarged image wave (3) and a planar reference wave (6) by means of an electron biprism (4);
 - registering the generated electron hologram (7);
 - extracting the phase of the image wave (3) by a Fourier analysis; and
 - measuring the two-dimensional potential distribution from the phase image.
3. Method of claim 1 or 2, characterized by the fact that the two-dimensional dopant distribution is carried out by adjustment to the measured potential distribution on the basis of numeric simulations of the fabrication process.

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